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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,460	07/09/2001	Jun-hyeong Kim	Q63313	4214

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EXAMINER	
PATEL, DHAIRYA A	

ART UNIT	PAPER NUMBER
2151	

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/900,460	KIM, JUN-HYEONG	
	Examiner	Art Unit	
	Dhairya A. Patel	2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-5,7-10 and 12-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5,7-10 and 12-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to communication filed on 7/20/2005.

2. Applicant's remarks are fully considered and entered. Claims 2,6,11 are canceled.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1,3-5,7,10,12-17,19 are rejected under 35 U.S.C. 102(e) as being unpatentable by Veltman et al. U.S. Patent Publication # 2002/0152311 (hereinafter Veltman).

As per claim 1, Veltman teaches a gateway, comprising:

-a first interface (Fig. 2 element 2a) which communicates with information appliances connected to an internal network (Paragraph 49,50,51);

-a second interface (Fig.2 element 2b) which communicates with information appliances connected to an external network(Paragraph 51,52); and

-a controller (Fig. 4 element 2) which, if a control request with respect to either of the information appliances connected to the internal network is received from the information appliances connected to the external network, requests a function performance to a corresponding information appliance through the first interface according to requested control contents (Fig. 1 element "arrow going from controller to the HTTP server")(Paragraph 46,47).

In the Figure 1, in the legend it teaches the broken arrow shows it is request for "device control or device status information").

wherein the controller includes:

-a DHCP server which allocates and manages different private IP addresses in accordance with a private IP address allocation request from the information appliances connected to the internal network, and receives host names from the information appliances allocated with the private IP addresses(Paragraph 58)(Paragraph 72)(Fig. 2);

The reference teaches DHCP server allocating different private IP address to the home net devices (information appliances) and receives host name from the information appliances.

-a DNS server which builds a database (Paragraph 69) in order for the host names and the private IP addresses to be associated in response to an update request from the DHCP server (Paragraph 69); and

-an application proxy server which transmits a list of the information appliances connected to the internal network in accordance with an access request of the information appliances connected to the external network, and transmits contents which control an information appliance selected from the transmitted list, and, if a control command is transmitted, requests a function performance to a corresponding information appliance according to the requested control command (Paragraph 46,47)(Paragraph 99,100,101).

-wherein the DNS server, if any one of the information appliances connected to the internal network makes an inquiry about a public IP address through the domain name with respect to an information appliance connected to the external network, provides the requested public IP address through an inquiry about the public IP address to an authorized DNS server connected to the external network (Paragraph 74,75,80)(Fig. 4,5).

The reference teaches having external IP address for the devices connected to the external network and access the devices through the external IP address (public IP address).

As per claim 3, Veltman teaches the gateway as claimed in claim 1, wherein the private IP addresses allocated to the information appliances connected to the internal network by the DHCP are the C class addresses defined by the Internet Assigned Numbers Authority (IANA)(Fig. 3 element "answer for internal devices")(Paragraph 58)(Paragraph 69).

As per claim 4, Veltman teaches the gateway as claimed in claim 1, wherein the DNS server builds the database by combining a domain name of the gateway and the host names of the information appliances connected to the internal network at a home, the domain name being registered in advance in an authorized DNS server connected to the external network (Paragraph 72)(Paragraph 73)(Paragraph 75)(Fig. 3,4).

As per claim 5, Veltman teaches The gateway as claimed in claim 4, wherein the DNS server, if any one of the information appliances connected to the internal network makes an inquiry about a private IP address through the host name with respect to another appliance connected to the internal network, provides the requested private IP address with reference to the database (Paragraph 58,59,64,74).

As per claim 7, Veltman teaches the gateway as claimed in claim 1, wherein the application proxy server, if a response to the control request is transmitted from the corresponding control-requested information appliance connected to the internal network, notifies the response result to the control-requesting information appliance connected to the external network (Fig. 6 element 8)(Fig. 7)(Paragraph 99,100,101,102,104).

As per claim 10, Veltman teaches a method for operating a gateway having a first interface (Fig. 2 element 2a) which communicates with information appliances connected to an internal network (Paragraph 49,50,51), a second interface (Fig. 2 element 2b) which communicates with information appliances connected to an external network (Paragraph 51,52), and a controller (Fig. 4 element 2) which communicates

with the information appliances connected to the internal and the external networks, comprising steps of:

-providing information on the information appliances connected to the internal network if an access request is transmitted from an information appliance connected to the external network (Fig. 1 element "arrow going from controller to the HTTP server")(Paragraph 46,47) ; and

-requesting a function performance to an appliance according to requested control contents if a control request with respect to the information appliances connected to the internal network is received from the information appliance connected to the external network (Fig. 1 element "arrow going from controller to the HTTP server")(Paragraph 46,47).

In the Figure 1, in the legend it teaches the broken arrow shows it is request for "device control or device status information").

wherein the step for providing the information on the information appliances connected to the internal network in response to the access request from the information appliance connected to the external network includes steps of: providing a list of the information appliances connected to the internal network; and providing, if any one of the information appliances is selected from the provided list, contents for controlling the selected information appliance(Paragraph 46,47)(Paragraph 99,100,101).

As per claim 12, Veltman teaches the method as claimed in claim 10, further comprising a step of, if a response according to the request of the function performance

from the information appliance connected to the internal network is transferred, transmitting a result to the control-requesting information appliance connected to the external network (Fig. 6 element 8)(Fig. 7)(Paragraph 99,100,101,102,104).

As per claim 13, Veltman teaches the method as claimed in claim 10, further comprising a step of registering a domain name of the gateway and a public IP address of a system to be associated to each other on an initialization of the system, the domain name being registered in advance in a DNS server authorized in the external network (Paragraph 72)(Paragraph 73)(Paragraph 75)(Fig. 3,4).

As per claim 14, Veltman teaches the method as claimed in claim 13, further comprising steps of:

-allocating, if the public IP address of the system is registered in the authorized DNS server connected to the external network, different private IP addresses in response to requests of private IP address allocations from the information appliances connected to the internal network (Paragraph 58,59,66,67,69,74); and

-receiving host names from the information appliances allocated with the private IP addresses and connected to the internal network, and building a database in order for the private IP addresses and the host names to be associated to each other (Paragraph 69,72,73,74,75,80)(Fig. 4,5).

As per claim 15, Veltman teaches the method as claimed in claim 14, wherein the private IP addresses allocated to the information appliances have C class address formats defined by Internet Assigned Numbers Authority (IANA) (Fig. 3 element "answer for internal devices")(Paragraph 58)(Paragraph 69).

As per claim 16, Veltman teaches the method as claimed in claim 14, wherein the step for building the database builds the database in names combined with the domain name of the gateway registered in advance in the authorized DNS server connected to the external network and the host names of the respective information appliances connected to the internal network (Paragraph 72)(Paragraph 73)(Paragraph 75)(Fig. 3,4).

As per claim 17, Veltman teaches the method as claimed in claim 14, further comprising a step of providing, if an inquiry about a public IP address is made through the domain name with respect to the information appliances connected to the external network from an information appliance connected to the internal network at a home, the public IP address through an inquiry to the authorized DNS server connected to the external network (Paragraph 74,75,80)(Fig. 4,5).

As per claim 19, Veltman teaches the method as claimed in claim 14, further comprising a step of providing, if a private IP address is inquired through a host name from any one of the information appliances connected to the internal network with respect to information appliances connected to an internal network at another home, a requested private IP address with reference to the database (Paragraph 58,59,64,74).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Veltman et al. U.S. Patent Publication # 2002/0152311 (hereinafter Veltman) in view of Humpleman et al. U.S. Patent # 6,243,707 (hereinafter Humpleman)

As per claim 8, Veltman teaches the gateway as claimed in claim 2, but fails to teach wherein the DHCP server, if an interruption request of the use of a private IP address is transmitted from an information appliance connected to the internal network, requests the DNS server to delete the private IP address of the corresponding information appliance and contents related to the host name from the database. Humpleman teaches the DHCP server, if an interruption request of the use of a private IP address is transmitted from an information appliance connected to the internal network, requests the DNS server to delete the private IP address of the corresponding information appliance and contents related to the host name from the database (column 11 lines 28-39).Therefore it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Humpleman's teaching in Veltman's teaching that if an interruption request of the use of a private IP address from an information appliance connected to the internal network and to delete the private IP address and corresponding information appliance and contents related to the host name from the database. The motivation for doing so would have been so that to avoid IP address conflict in which it would have been sharing same IP address.

5. Claims 9,18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Veltman et al. U.S. Patent Publication # 2002/0152311 (hereinafter Veltman) in view of Bhatia et al. U.S. Patent # 6,052,803 (hereinafter Bhatia).

As per claim 9, Veltman teaches the gateway as claimed in claim 1, but fails to teach wherein the controller, if a data packet to be transmitted from one of the information appliances connected to the internal network to one of the information appliances connected to the external network is transferred to the first interface, changes an origination address and a port from a private IP address and a port to a public IP address and a port of the gateway to be outputted to the external network through the second interface, and, if a data packet having a destination address and a port as the public IP address of the gateway is transferred from the external network to the second interface in response to the output, changes the public IP address and the port to the private IP address and the port of the corresponding information appliance to be outputted through the first interface. Bhatia teaches the controller, if a data packet (column 12 line 15) to be transmitted from one of the information appliances connected to the internal network (column 12 line 17) to one of the information appliances connected to the external network (column 12 line 17) is transferred to the first interface, changes an origination address (column 12 line 20-21) and a port from a private IP address (column 12 line 19-20) and a port to a public IP address and a port of the gateway to be outputted to the external network through the second interface (column 12 line 12-53), and, if a data packet having a destination address and a port as the public IP address of the gateway is transferred from the external network to the second interface in response to the output, changes the public IP address (column 12 line 12-13) and the port to the private IP address (column 12 line 11-12) and the port of the

corresponding information appliance to be outputted through the first interface (column 12 line 8-15).

Bhatia further teaches a data packet transmitted from the LAN to the remote network changing the source IP address on the packet to the private address into public IP address and a port of the gateway to the remote network (external network (column 12 lines 15-23) The reference also teaches data packets transmitted from the remote network to the LAN having public address of the gateway is transferred from the remote network to the LAN and changing the public address to the private IP address and the port of the corresponding information appliance (column 12 lines 8-15). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Bhatia's teaching in Veltman's teaching to come up with having a data packet transmitted from one of the information application connected to the external network is transferred to the first interface, changes an origination address and a port from a private IP address and a port to a public IP address and a port of the gateway to be outputted to the external network through the second interface and vice versa. The motivation for doing so would have been so that data packet would be routed to the proper network accordingly.

As per claim 18, Veltman teaches the method as claimed in claim 17, but fails to teach further comprising steps of: changing, if a data packet to be transmitted from the information appliance receiving the public IP address of the information appliance connected to the external network to the external information appliances connected to the external network is transferred to the first interface, origination address and port

from private IP address and port to public IP address and port of the gateway, and outputting the changed origination address and port to the external network through the second interface; and changing, if a data packet having the public IP address of the gateway as destination address and port is transferred to the second interface from the external network in response to the data packet, the public IP address and port into the private IP address and port of a corresponding information appliance connected to the internal network, and outputting the converted private IP address and port through the first interface.

Bhatia teaches changing, if a data packet (column 12 line 15) to be transmitted from the information appliance receiving the public IP address of the information appliance connected to the external network (column 12 line 17) to the external information appliances connected to the external network is transferred to the first interface, origination address (column 12 line 20-21) and port from private IP address (column 12 line 19-20) and port to public IP address and port of the gateway, and outputting the changed origination address and port to the external network through the second interface(column 12 line 15-23); and

-changing, if a data packet having the public IP address of the gateway as destination address and port is transferred to the second interface from the external network in response to the data packet, the public IP address (column 12 line 12-13) and port into the private IP address (column 12 line 11-12) and port of a corresponding information appliance connected to the internal network, and outputting the converted private IP address and port through the first interface (column 12 line 8-15).

Bhatia further teaches a data packet transmitted from the LAN to the remote network changing the source IP address on the packet to the private address into public IP address and a port of the gateway to the remote network (external network) (column 12 lines 15-23) The reference also teaches data packets transmitted from the remote network to the LAN having public address of the gateway is transferred from the remote network to the LAN and changing the public address to the private IP address and the port of the corresponding information appliance (column 12 lines 8-15).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Bhatia's teaching in Veltman's teaching to come up with having a data packet transmitted from one of the information application connected to the external network is transferred to the first interface, changes an origination address and a port from a private IP address and a port to a public IP address and a port of the gateway to be outputted to the external network through the second interface and vice versa. The motivation for doing so would have been so that the data packet would be routed to proper network accordingly.

6. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Veltman et al. U.S. Patent Publication # 2002/0152311 (hereinafter Veltman) in view of Bhatia et al. U.S. Patent # 6,052,803 (hereinafter Bhatia) in further in view of Humpleman et al. U.S. Patent # 6,243,707 (hereinafter Humpleman)

As per claim 20, Veltman and Bhatia teaches the method as claimed in claim 14, but both fails to teach further comprising a step of deleting, if an interruption request of the use of a private IP address is transferred to the first interface from an information

appliance connected to the internal network, the private IP address and contents of a host name of a corresponding information appliance from the built database. Humpleman teaches deleting, if an interruption request of the use of a private IP address is transferred to the first interface from an information appliance connected to the internal network, the private IP address and contents of a host name of a corresponding information appliance from the built database (column 11 lines 28-39). Therefore it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Humpleman's teaching in Veltman's teaching that if an interruption request of the use of a private IP address from an information appliance connected to the internal network and to delete the private IP address and corresponding information appliance and contents related to the host name from the database. The motivation for doing so would have been so that to avoid IP address conflict in which it would have been sharing same IP address.

Remarks

As per remarks, applicant stated the following:

As per claims 1 and 10, applicant stated the Veltman does not teach public IP address or domain name with respect to an information appliance connected to the external network. Examiner respectfully disagrees with the applicant because in Paragraph 74, Paragraph 75, Veltman teaches that having external IP address for the devices connected to the external network and access the devices through the external IP address (public IP address). In Paragraph it states that internet device sends a query to the DNS server "who is storage.no29.bahnstrasse.bonn.de?" and get an IP address

of the external interface and gets the IP address of the external device (IP address respect to information appliance). Therefore, Veltman does teach public IP address or domain name with respect to an information appliance connected to the external network.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A). "Establishing connections between remote devices with a hypertext transfer protocol" by Veltman et al. U.S. Patent Publication # 2002/0152311.

B). "DNS server, DHCP server, terminal and communication system" by Asami et al. U.S. Patent Publication # 2001/0023459.

C). "Key-based Technique for assuring and maintaining integrity of firmware stored in both volatile and non-volatile memory" by Bhatia et al. U.S. Patent # 6,052,803

8. A shortened statutory period for response to this action is set to expire **3 (three) months and 0 (zero) days** from the mail date of this letter. Failure to respond within the period for response will result in **ABANDONMENT** of the applicant (see 35 U.S.C 133, M.P.E.P 710.02, 710.02(b)).

9.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dhairya A. Patel whose telephone number is 571-272-5809. The examiner can normally be reached on 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAP

ZARNI MAUNG
SUPERVISORY PATENT EXAMINER